

PENNSYLVANIA DEPARTMENT OF AGRICULTURE
BUREAU OF PLANT INDUSTRY
HARRISBURG, PA.

GRAPE LEAF-HOPPER

The grape leaf-hopper is at times a very serious pest of grapes. On vines that are severely infested the leaves are injured before the grapes ripen, and the fruit on such vines when ripened is sour and valueless for eating out of hand, for grape juice or wine. In a vineyard (ten acres) under our observation not a good cluster of grapes was harvested because of the attacks of this insect.

The adults winter over in herbage, plant rubbish and waste places in or near the vineyard. As soon as growth starts they get on the underside of the grape leaves and live and feed there all summer. The adults lay their eggs in June, and the nymphs or young soon appear. They are in greatest abundance about the middle of July, but successive generations appear until frost.

The leaf-hoppers gain their food by sucking the sap from the leaves. They insert their mouth parts in a cell, drink their fill, and then move about until they are again thirsty or hungry, when they repeat the process. Every cell into which the mouth parts are so thrust dies, and the surrounding cells also die. They feed several times a day.

What this means to a leaf can be readily understood by the following calculations. It is not unusual to find 100 leaf-hopper nymphs on a single leaf. If each should feed twice a day for two months that would mean 12,000 injured areas. Twenty thousand such injured areas have been counted on a single leaf.

CONTROL.— The time to spray is when the nymphs are in greatest abundance, and before any of them have reached the winged stage.

Use Black Leaf 40, diluting it at the rate of one part to 800 parts of water (one pint in 100 gallons of water), and to each 100 gallons of the diluted mixture add four to eight pounds of soap, dissolving the soap before adding. The amount of soap necessary will depend upon the "hardness" of the water. Lately it has been found that Black Leaf 40 one to 600 will kill both eggs and nymphs. This spray should be made two weeks earlier or at the time of the second Berry Moth spray.

Apply under pressure of at least 200 to 250 pounds. Use a nozzle of the disk type having a large aperture, so that the spray will be coarse. Arrange a spray boom to cover both sides of the row using at least five nozzles.

The spray must hit the underside of the leaves, as that is where the leaf-hopper lives. Not less than 150 gallons are required to thoroughly spray an acre of grapes.

SANITATION.— It is desirable to maintain good culture of land about grapes and to burn over adjacent waste areas to kill the hoppers, and also to destroy the over-wintering stages of other grape pests.

